

DIVISION 4. LANDSCAPING, BUFFER, AND GREENBELT REGULATIONS

Sec. 24.1-240. Intent.

The following regulations ~~established herein~~ are intended to establish minimum standards for landscape design ~~the design of landscapes in development areas~~ and practices for the preservation of trees in order to better control soil erosion and the transport of sediment, protect and improve the quality of surface and groundwaters, screen noise and dust, and preserve, protect and enhance the natural and built environment.

The transitional buffer regulations established herein are intended to minimize potential conflicts between development on properties located in abutting zoning districts of differing intensities. The purpose of transitional buffers is to ensure that a natural area of appropriate size and density of plantings is located between potentially incompatible land uses.

The greenbelt regulations established herein are intended to implement the specific comprehensive plan designations of greenbelts.

Sec. 24.1-241. Landscape plan.

- (a) A landscape plan ~~shall be:~~ shall be required under the following circumstances:
- (1) Required in conjunction with any ~~Any application for any~~ development project requiring site plan or development plan approval; ~~shall include a landscape plan as an integrated part of the overall site or development plan.~~
 - (2) ~~Landscape plans may be prepared by the property owners or their agents for sites of less than five acres (5ac) [2.5 ha]. For development sites of five acres (5ac) [2.5 ha] or more landscape plans shall be p~~ Prepared and/or certified by a landscape architect, landscape nursery person, horticulturalist, or other design professional practicing within their area of competence; provided, however, that in the case of development proposals involving sites located on a secondary system roadway and classified IL or IG, the landscaping plan may be prepared by the property owner; unless exempted by the zoning administrator in accordance with section 24.1-505 of this chapter.
 - (3) ~~Landscape plans s~~ shall incorporate cover the entire project area ~~or property which is~~ included in the overall site plan or development plan for which approval is sought.
- (b) A landscape plan submitted to meet the requirements established by the provisions of this chapter shall include the following information and existing and proposed site landscape features:
- (1) Location and identification by size and name, both common and botanical, of all ~~mature~~, heritage, memorial or specimen trees in open areas on the site which are proposed to be disturbed. In wooded areas, the woodline before site preparation, average size, and predominant species of trees shall be noted, except that any heritage or, memorial, ~~significant or specimen tree~~ within a wooded area proposed for clearing shall be individually located and identified by size and name, both botanical and common.

- (2) Existing vegetation to be saved shall be indicated and noted accurately if credits for tree preservation are being proposed or claimed.
 - (3) Location, dimensions and area of all required buffer ~~and landscape~~ and landscape yards, including transitional areas.
 - (4) Location and description of other proposed landscape improvements such as earth berms, walls, fences, ~~screens, sculptures, fountains, street furniture, lights and courts~~ or paved areas including notes and details to describe fully the methods and materials proposed.
 - (5) Plant list or schedule to include common and botanical name, quantity, spacing and size at time of planting of all proposed plants.
 - (6) Locations and labels of all proposed plants.
 - (7) Planting, installation details and tree protection details as necessary to ensure conformance with the standards in section 24.1-242.
 - (8) Schedules or lists showing required and proposed quantities for landscape items required by the zoning ordinance.
- (c) In preparing landscape plans the following factors shall be considered:
- (1) ~~Location of trees, shrubs, groundcovers and other landscaping shall be located to~~ utilize effectively the natural capacities of plant materials to intercept and absorb airborne and runoff-related pollutants and to reduce runoff volume, velocity and peak flow increases caused by development.
 - (2) ~~Existing viable and mature trees shall be preserved and protected as a part of the overall landscaping plan~~ Preservation and protection of existing viable and mature trees to the maximum extent feasible.
 - (3) Appropriateness of plants and locations ~~Landscape materials and designs shall be appropriate~~ for the specific characteristics of the site and the purpose for installation.
 - (4) ~~A preference should be given to~~ designs and plant materials with which have reduced water needs.
 - (5) An emphasis on Plans shall be designed in a manner which emphasizes landscaping in front of the principal building on the site and provides on providing appropriate breaks in parking and vehicular areas.
- (d) No site or development plan required under the terms of this chapter shall receive final approval unless a landscaping plan has been submitted and approved.
- (e) No certificate of zoning compliance or certificate of occupancy may be issued unless the following criteria are fully satisfied with regard to the approved landscape plan:
- (1) Such plan has been implemented on the site; or
 - (2) Such plan, because of seasonal conditions, cannot be implemented immediately, but has been guaranteed by a postponed improvement agreement between the developer and the county in a form acceptable to the county attorney, and secured by a letter of credit, cash escrow or other instrument acceptable to the county attorney in an amount equal to the cost of such installation plus a reasonable allowance for

estimated administrative costs, inflation and potential damage to existing vegetation or improvements (see sample agreement in Appendix B). An irrevocable fully executed contract with a landscape contractor or nursery providing for such installation shall be deemed to be a sufficient guarantee for the purposes of this section.

Sec. 24.1-242. Landscaping standards.

- (a) *Maintenance of landscaping and screening.* The property owner, or the owner's successors, shall be responsible for the maintenance of all landscaping, fencing, and screening materials required by this chapter or under the terms of other development approvals and shown on an approved landscape plan. Failure to maintain such landscaping, fencing and screening shall be deemed a violation of this chapter.
 - (1) All plant material and planting areas required by this chapter or other development approval shall be tended and maintained in a healthy growing condition, replaced when necessary, and kept free of refuse, litter, and debris. The replacement provision for landscaping shall apply only to plants that were required to be installed or that were awarded preservation credits as part of the site plan approval process.
 - (2) All fences, walls, and screening required by this chapter ~~or shown on the plan~~ shall be maintained in good repair.
 - (3) In the event that any *required* landscaping material shown on the plan is subsequently replaced, the all new material shall conform with the original approved landscape plan, or an approved amended plan, with respect to size and characteristics of the plantings. In meeting the terms of this section, the replacement of mature trees which were counted toward the original landscape compliance on-site shall ~~require the installation of~~ be with trees of a similar species and of a size that meets the standards for new installations.
- (b) *Source standards.* All plant materials installed on a site shall have been grown in conformance with the American Standard for Nursery Stock, provided however that the zoning administrator may approve, in writing, the transplanting of trees or shrubs when such transplanting is done in accordance with accepted horticultural and silvicultural practices.
- (c) *Standards for berms and earthforms.* All berms and earthforms required or otherwise proposed for use shall conform with the following standards (See Figure II-5 in Appendix A):
 - (4) ~~The design shall be reviewed to ensure that proper erosion prevention and control practices have been utilized.~~
 - (12) ~~Berms and earthforms shall be designed with~~ Design should include physical variations in height and alignment ~~throughout their length.~~
 - (23) Landscape plant material installed on berms and earthforms ~~should shall~~ be arranged in an irregular pattern to accentuate variation and achieve a natural appearance.
 - (4) ~~The landscape plan shall show sufficient detail, including a plan and profile of the berm or earthform, soil types and construction techniques, to demonstrate compliance with the above provisions.~~

- (35) ~~Berms and earthforms shall be located and designed to~~ Location and design shall minimize disturbance to existing trees located on the site or adjacent thereto.
- (46) ~~Berms and the plantings thereon shall comply fully with the s~~ Sight triangle provisions contained in this chapter and the subdivision ordinance shall be observed.
- (d) *Layout and design standards.* Except as may be otherwise required by this article, the following layout and design standards shall apply to all landscape plans:
- (1) All trees installed to meet the requirements of this chapter shall be comprised of a combination of tree types (e.g., deciduous shade, evergreen, flowering ornamental) unless otherwise specified. No more than fifty percent (50%) of the required trees shall be of one type (i.e., deciduous, evergreen), nor shall more than twenty-five percent (25%) of the required trees be of a single species.
- (2) All trees installed to meet the requirements of this chapter ~~should shall~~ be dispersed throughout the required planting areas, ~~should shall~~ be planted with a combination of single and groups of trees in a staggered, clustered or other pattern designed to complement the building and site design and promote appropriate views and sight lines. ~~Trees and~~ shall not be installed in a continuous single row except where necessary and appropriate to meet screening or transitional buffer requirements.
- (3) Shrubs, perennials and ornamental grasses installed to meet the requirements of this chapter ~~should shall~~ be installed in groupings and integrated with trees.
- (4) Existing vegetation which is suitable for use in the landscape shall be preserved and used as required plantings to the maximum extent practicable. In no case shall any viable mature, heritage, memorial, specimen or significant tree be removed from any buffer area or landscape preservation easement except to accommodate necessary entrances or utility service to the site which cannot be relocated in an appropriate manner or where such preservation would create or perpetuate demonstrable public health, safety, or welfare hazards.
- (5) ~~No more~~ Impervious surface area shall be limited to the minimum amount necessary to accommodate the desired development and ensure appropriate levels of parking, traffic safety, and on-site circulation, ~~shall be utilized in the design of a site.~~ The zoning administrator may require plan modifications which reduce the amount of impervious surface area without inhibiting site development and operation.
- (6) ~~Landscaped open space and the landscaping thereon installed to meet the requirements of this chapter shall be distributed throughout required planting areas.~~
- (67) Modifications of the layout and design standards contained herein may be approved by the zoning administrator upon a determination that where all of the following conditions exist, are met. The zoning administrator may require certification by a certified landscape architect that the following conditions have been satisfied:
- a. The proposed layout and design furthers a readily discernible theme or complements the architectural style of the structures on site. The lining of an entrance road or driveway with trees of the same species in straight lines parallel to the road or driveway in an attempt to further a colonial or antebellum theme expressed in the architecture of the buildings or the use of massed ornamental plantings to highlight or complement a unique architectural or natural feature are examples.

- b. The proposed layout and design provides landscaping which will have the same or similar screening impact, intensity, or variation throughout the year when viewed from adjacent properties or rights-of-way as that which would be required by strict interpretation of the standards contained in this subsection.
 - c. The proposed layout and design fully integrates and complements the existing trees to be preserved on the site.
- (78) Any trees or shrubs installed or preserved on the site which exceed the minimum numerical requirements of this chapter ~~as well as any trees preserved on the site~~ shall not be subject to the species mixture, ~~or~~ locational, maintenance or replacement requirements contained herein.
- (e) *Tree protection standards.*
- (1) Trees which are to be preserved on site shall be protected before, during and after the development process utilizing accepted practices. At minimum, the tree protection practices set out in the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992 shall be utilized.
 - (2) Trees selected for preservation in order to obtain landscaping credits shall be shown on the landscape plan and clearly marked in the field. In woodland areas, groups of trees shall be selected for preservation rather than single trees wherever possible.
 - (3) Trees and groups of trees which are to be preserved shall be enclosed by a temporary fence or barrier to be located and maintained five feet (5') [1.5m] outside of their dripline during construction. Such a fence or barrier shall be installed prior to clearing or construction, shall be sufficient to prevent intrusion into the fenced area during construction, and in no case shall materials, vehicles or equipment be stored or stockpiled within the enclosure. Within the fenced area, the topsoil layer shall not be disturbed except in accordance with accepted tree protection practices.
 - (4) The developer shall be responsible for notifying all construction personnel of the presence and purpose of clearing limits and protective fences or barriers and for ensuring that they are observed.
 - (5) Where grade changes in excess of six inches (6") [150mm] from the existing natural grade level are necessary, permanent protective structures such as tree wells or walls shall be properly installed.
- (f) *Selection of trees for preservation.* In determining which trees shall be preserved during the development process, consideration shall be given to preserving trees which:
- (1) Are heritage, memorial, significant and specimen trees
 - (2) Complement the project design including the enhancement of the architecture and streetscape appearance
 - (3) Can tolerate environmental changes to be caused by development (i.e., increased sunlight, heat, wind and alteration of water regime)
 - (4) Have strong branching and rooting patterns
 - (5) Are disease and insect resistant

- (6) Complement or do not conflict with stormwater management and Best Management Practice designs
- (7) Are located in required buffer areas
- (8) Exist in natural groupings, including islands of trees
- (9) Do not conflict with necessary utility, structure, parking area, roadway or sidewalk placements
- (10) Have been recommended by the Virginia Department of Forestry, the York County Cooperative Extension Service or a qualified arborist or urban forester for preservation.
- (g) *Species standards.* All required landscape plant material proposed to be installed on the site shall be selected from the appropriate listing of recommended plant material contained in tables II-1 through II-~~7~~ 6 in Appendix A and shall be of the minimum sizes noted provided, however, that alternative species may be used, upon certification by a certified landscape architect, landscape nurseryman or horticulturalist ~~that~~ said species have a rated hardiness and growth habit appropriate for the intended location. Particular attention shall be given to selecting trees and shrubs based on the area in which they will be installed (e.g., landscaped yards, parking areas, adjacent to buildings, etc.) and the lists contained in Appendix A will assist in the selection and review of a landscaping design. In addition, landscaping shall be selected and arranged with appropriate attention to future growth and maturity in order to accommodate visibility, safety and aesthetic considerations without need for future severe pruning or removal.

All landscaping required within this chapter shall conform with the following minimum size standards unless specifically modified by other provisions contained herein:

Plant Material Type	Minimum Size At Time of Installation	Minimum Branch Spread	
TREES:			
Deciduous:			
• <u>Shade</u>	10' height and 1" caliper <u>3m height and 40mm caliper</u>	4' <u>1.25m</u>	
Flowering/ <u>Ornamental</u>			
• <u>single-stem</u>	8' height and 1 1/4" caliper <u>2.5m height and 35mm caliper</u>	4' <u>1.25m</u>	
• <u>multi-stem</u>	8' height <u>2.5m height</u>	4' <u>1.25m</u>	
Evergreen	8' height and 1 1/4" caliper <u>2.5m height and 35mm caliper</u>	4' <u>1.25m</u>	
SHRUBS:			
Deciduous	<u>24" [65cm] height or spread</u>	N/A	
Evergreen	<u>18" [45cm] height or spread</u>	N/A	
*At least fifty percent (50%) of the deciduous shade trees required to be installed in parking lots shall have a minimum caliper of two and one half inches (2 1/2") [65mm]. Refer to 24.1-609 for additional design requirements for parking lots.			

(h) *Numerical standards:*

- (1) Unless a greater or lesser number or ratio is specified elsewhere in this chapter as it pertains to specific development types and forms, the following planting ratios ~~for trees and shrubs shall be utilized~~ shall be required (all fractional ~~landscape elements calculations~~ shall be rounded up to the next highest whole number):

<u>Planting Calculations</u>	
<u>Location</u>	<u>Landscape Credit Unit (LCU) Requirement</u> (required credits per 100 linear feet measured at lot line or building face)
<u>Front Yard</u>	40 <u>60</u> credits per 100 feet
<u>Side Yard(s)</u>	<u>10</u> credits per 100 feet
<u>Building Perimeter</u>	<u>15</u> credits per 100 feet
<u>Parking Lot</u>	15 <u>25</u> credits per 10 spaces

In the case of front yards, side yards and parking lots, a minimum of 50% and a maximum of 75% of the landscaping credits must be earned from trees. In the case of building perimeters, a minimum of 25% and a maximum of 50% of the landscaping credits must be earned from trees. Ornamental grasses and perennials may be incorporated into the landscape design and shall be eligible for achieving up to 25% of the required/proposed shrubs credits.

<u>LOCATION</u>	<u>PLANTING RATIOS</u> Number: square footage {number: square meters}	
	<u>Trees</u>	<u>Shrubs</u>
<u>Front Yard¹</u>	<u>1:350 [1:30m²]</u>	<u>3:350 [1:10m²]</u>
<u>Side Yard¹</u>	<u>1:700 [1:60m²]</u>	<u>3:700 [1:20m²]</u>
<u>Rear Yard¹</u>	<u>0</u>	<u>0</u>
<u>Building Perimeter²</u>	<u>1:500 [1:45m²]</u>	<u>3:350 [1:15m²]</u>
<u>Parking Lots³</u>	<u>1:2400 [1:220m²]</u>	<u>1:800 [1:75m²]</u>
<u>NOTES: Both trees and shrubs are required.</u>		
¹ Calculated based on total size of landscaped yard.		
² Calculated based on total planting area (pedestrian walkways, bicycle accommodations and street furniture may not comprise more than 50% of the required building perimeter green area on any side.)		
³ Calculated on total surface area of parking lots and travel aisles.		

- (2) ~~When permitted open space transfers occur, they shall be landscaped at the ratios required in the location from where the transfer occurred.~~

- (2) (3) ~~Landscaping credits shall be awarded/earned based on the values established in the following table. Where existing healthy trees are preserved, fully protected during the development process and incorporated into the overall landscape plan for the site, credit shall be given and the number of required tree plantings reduced in accordance with the following:~~

<u>Landscape Credit Unit (LCU) Values</u>			
<u>New Planting</u>	<u><i>Deciduous</i> (Minimum Caliper)</u>	<u><i>Evergreen or Ornamental</i> (Minimum Height)</u>	<u>LCU value</u>
<u>Large Tree</u>	<u>3 inches</u>	<u>10 feet</u>	<u>9 6</u>
<u>Medium Tree</u>	<u>2.5 inches</u>	<u>8 feet</u>	<u>6</u>
<u>Small Tree</u>	<u>2 inches</u>	<u>8 feet</u>	<u>5 4</u>
<u>Trees</u>	<u>1.5 inches</u>	<u>6 feet</u>	<u>3</u>
<u>Shrub</u>	<u>1 foot (1') 18 inches height or spread</u>		<u>2</u>
<u>Ornamental Grasses or Perennial Beds</u>	<u>1 gallon size</u>		<u>1</u>
<u>Existing Tree</u>	<u>Minimum Caliper Minimum Height</u>		<u>LCU value</u>
<u>Mature</u>	<u>> 13 inches</u>		<u>15</u>
<u>Large</u>	<u>11 to 13 inches</u>		<u>12</u>
<u>Medium</u>	<u>6 to 10 inches</u>		<u>8</u>
	<u>N/A</u>		
<u>Small</u>	<u>3 to 5 inches</u>		<u>5</u>

<u>Existing Tree Caliper</u>		<u>Tree Credit</u>
<u>2" to 4" {50-100mm}</u>	\varnothing	<u>4</u>
<u>5" to 9" {125-230mm}</u>	\varnothing	<u>2</u>
<u>10" to 14" {255-360mm}</u>	\varnothing	<u>3</u>
<u>15" to 19" {390-485mm}</u>	\varnothing	<u>4</u>
<u>20" + {500mm+}</u>	\varnothing	<u>5</u>

- (i) ~~Xeriscaping Incentives. The otherwise required number of landscape plantings may be reduced by fifteen percent (15%) when the xeriscape (low water requirements) design principle of appropriate plant selection and placement, based on function, water requirement, and suitable environmental exposure of the plant materials is used in accordance with the following:~~

- ~~(1) The landscaping shall be designed by a certified landscape architect.~~
- ~~(2) Fifty percent (50%) of the plants used in all vehicular use area landscape designs shall be drought tolerant and located in groupings according to water requirements. (Drought tolerant species are noted on tables II-1 through II-6 in Appendix A.)~~
- ~~(3) Seventy-five percent (75%) of the plants used in all vehicular use area landscape designs shall be native or drought tolerant.~~
- ~~(4)(4) All plantings shall be irrigated in zones separating high use lawn areas from drought tolerant zones.~~
- ~~(5) All areas where any one dimension is five feet (5') [1.5m] or less and in areas where drought tolerant plants are grouped shall use drip, trickle, bubble, or micro sprinklers.~~
- ~~(6) All irrigation systems shall be automatic with cycling capacity and shall be designed to avoid irrigation of unplanted surfaces.~~
- ~~(7) All planting islands within parking areas shall use drought tolerant shrubs and ground covers instead of grass.~~
- ~~(8) All planting areas shall be mulched with three inches (3") [75mm] of organic mulch, such as wood chips, pine needles, or oak leaves. Mulch shall be placed directly on soil or landscaping fabric and be edged properly to retain mulch.~~

Sec. 24.1-243. Transitional buffers.

- (a) *Buffer types.* Transitional buffers of the following types shall be provided in the situations identified by the entries in the table contained in section 24.1-243(b) below. Where there is no entry for a particular combination of districts, no transitional buffer shall be required. The layout, design, and arrangement of the prescribed numbers and types of landscape materials shall be in accordance with the provisions of section 24.1-242 of this chapter. Plants shall be positioned to achieve the greatest benefit in terms of buffering the views of adjacent and potentially incompatible uses. The use of staggered double rows of plant materials is encouraged as a technique to achieve maximum screening benefits. Shrubs planted in the transitional buffer shall be of a type that will have a mature height of at least four (4) feet and when located within an existing or newly planted wooded area, shall be selected based on their suitability for shaded areas and any other growth-inhibiting characteristics of the subject area.
- (1) *Transitional Buffer Type 25:* shall consist of a strip of open space, a minimum of twenty-five feet (25') ~~[7.5m]~~ wide, landscaped with evergreen trees and shrubs to achieve a minimum of 0.75 landscape credits for every linear foot measured along the outside edge of the transitional buffer. A maximum of 70% of the landscape credits may be earned from shrubs to achieve the following ratios, at a minimum:
 - a. ~~one (1) large evergreen tree (ultimate height greater than or equal to 40' [12m]) for every thirty (30) linear feet [9m] measured along the outside edge of the transitional buffer; plus~~
 - b. ~~one (1) medium evergreen tree (ultimate height 20' - 40' [6-12m]) for every twenty-five (25) linear feet [7.5m] measured along the outside edge of the transitional buffer; plus~~
 - c. ~~three (3) evergreen shrubs (ultimate height 4' - 8' [1-3m]) for each ten (10) linear feet [3m] measured along the outside edge of the transitional buffer.~~

~~Plants shall be staggered throughout the buffer and not planted in straight rows. (See Figure II-7 in Appendix A)~~

- (2) *Transitional Buffer Type 35:* shall consist of a strip of open space, a minimum of thirty-five feet (35') wide, landscaped ~~to achieve the following ratios, at a minimum with evergreen trees and shrubs to achieve a minimum of (1) landscape credit for every linear foot measured along the outside edge of the transitional buffer. A maximum of 70% of the landscape credits may be earned from shrubs.:~~
- a. ~~one (1) large evergreen tree (ultimate height greater than or equal to 50' [15m]) for every twenty-five (25) linear feet [7.5m] measured along the outside edge of the transitional buffer; plus~~
 - b. ~~one (1) medium evergreen tree (ultimate height 20'-40' [6-12m]) for every twenty (20) linear feet [6m] measured along the outside edge of the transitional buffer; plus~~
 - c. ~~three (3) evergreen shrubs (ultimate height 4'-8' [1-3m]) for each ten (10) linear feet [3m] measured along the outside edge of the transitional buffer.~~
- ~~Plants shall be staggered throughout the buffer and not planted in straight rows. (See Figure II-7 in Appendix A)~~
- (3) *Transitional Buffer Type 50:* shall consist of a strip of open space, a minimum of fifty feet (50') ~~[15m]~~ wide, landscaped with evergreen trees and shrubs to achieve a minimum of 1.25 landscape credits for every linear foot measured along the outside edge of the transitional buffer. A maximum of 50% of the landscape credits may be earned from shrubs. ~~to achieve the following ratios, at a minimum:~~
- a. ~~one (1) large evergreen tree (ultimate height greater than or equal to fifty feet (50') [15m]) for every twenty-five (25) linear feet [7.5m] measured along the outside edge of the transitional buffer; plus~~
 - b. ~~one (1) medium evergreen tree (ultimate height 20'-40' [6-12m]) for every fifteen (15) linear feet [4.5m] measured along the outside edge of the transitional buffer; plus~~
 - c. ~~one (1) small evergreen or ornamental tree (ultimate height 10' - 20' [3-6m]) for each ten (10) linear feet [3m] measured along the outside edge of the transitional buffer; plus~~
 - d. ~~three (3) evergreen shrubs (ultimate height 4'-8' [1-3m]) for each ten (10) linear feet [3m] measured along the outside edge of the transitional buffer.~~
- ~~Plants shall be staggered throughout buffer and not planted in straight rows. (See Figure II-7 in Appendix A)~~
- (4) Upon specific written request, the zoning administrator may modify the landscaping requirements for transitional buffers which have been designed by a certified landscape architect in order to preserve mature trees, facilitate a clearly discernible development and planting theme, or complement the arrangement and type of surrounding landscaping provided, however, that the landscape architect must certify that the modified buffer will provide at least the equivalent buffering as would otherwise be required and that the buffering will be from landscape means (i.e., exclusive of fencing).
- (5) The zoning administrator may require supplementary fencing either temporarily or permanently in order to ensure that the appropriate degree of visual buffering and noise attenuation is achieved.

- (b) *Transitional buffer provision matrix.* Transitional buffers shall be provided as follows:

TRANSITIONAL BUFFERS																
	RESIDENTIAL DISTRICTS								COMMERCIAL & INDUSTRIAL DISTRICTS							
	RC	RR	R20	R13	R7	YVA	PD	RMF	NB	WCI	LB	GB	EO	IL	IG	
RC	X								25	25	25	25	35	35	50	
RR		X							25	25	35	35	35	35	50	
R20			X						25	25	35	35	35	50	50	
R13				X					25	25	35	35	35	50	50	
R7					X				25	25	35	35	35	50	50	
YVA						X			25	25	25	35	35	50	50	
PD							X		25	25	25	35	35	50	50	
RMF								X	25	25	25	25	25	35	50	
NB	2	2			2		25	25	X				25	35	50	
WCI	25	25	25	25	25	25	25	25		X				35	50	
LB	25	35	35	35	35	25	25	25			X			35	50	
GB	25	35	35	35	35	35	35	25				X			35	
EO	35	35	35	35	35	35	35	25	25				X		25	
IL	35	35	50	50	50	50	50	35	35	35	35			X	25	
IG	50	50	50	50	50	50	50	50	50	50	50	35	25	25	X	

- (c) *Buffer location standard.* Transitional buffers shall be installed along the zoning district lines at such time as any development or site modification requiring site plan approval on property abutting such district lines occurs. **For the purposes of the following provisions, residentially-zoned property that has been subdivided into lots or that has an area of less than 2.5 times the minimum lot size for the district in which located shall be considered "developed" property, whether or not houses have been constructed on those lots.** The location **of transitional buffers** shall be determined as follows:

- (1) Where both properties are currently undeveloped and one of the properties is residentially-zoned, the buffer shall be established entirely on the residentially zoned property whenever it develops. In other situations where both properties are undeveloped, one-half (1/2) of the required transitional buffer shall be established on each of the parcels in the order in which developed. The location width of the buffer on the respective properties may be modified by mutual agreement of the property owners involved as evidenced by a lawfully executed agreement(s) and easement(s) between the property owners specifying how the buffer is to be shared; such agreement(s) and easement(s) shall be recorded at the expense of the applicant in the name of the property owner(s) as grantor(s) in the office of the clerk of the circuit court. A landscape preservation easement shall be established over the area encompassed by the required buffer with the county and each property being granted rights under that easement.
- (2) Where one property has previously been lawfully developed, the required transitional buffer shall be provided entirely on the undeveloped property unless an agreement evidenced by a lawfully executed easement between the two property owners to share the buffer in a mutually agreeable manner is executed; such easement shall be recorded at the expense of the applicant in the name of the property owners as grantors in the office of the clerk of the circuit court. In the latter case, the zoning administrator shall ensure that the required buffer is installed in an acceptable

manner and that a landscape preservation easement is granted over the buffer areas to the county and each of the subject properties.

- (3) Where the properties on both sides of the zoning line have been previously developed, but one is being redeveloped or otherwise modified to the extent that site plan review and approval is required, said property shall be responsible for providing ½ of the normally required the transitional buffer as part of the redevelopment/site modification plan. shall ultimately be established on both properties in approximately equal amounts provided, however, that the zoning administrator may grant relief from this requirement as provided in section 24.1-243(f).

- (4) Where the zoning district line is defined by the centerline of a right-of-way, the transitional buffer shall be installed along the right-of-way line on the property having the higher zoning intensity.

(The chart in subsection (b) above lists the zoning districts in order of intensity from least intense at the top and left to most intense at the bottom and right.)

(d) *Design standards.*

- (1) Transitional buffers shall be continuous except where driveways or other breaks are necessary. To the extent possible, driveways should be curved in order to preserve the view-obstructing qualities of the transitional buffer area. Multiple breaks of the transitional area shall not be permitted except to provide an efficient and safe site access and internal circulation pattern.
- (2) Transitional buffers shall not be used for accessory structures, storage, or off-street parking or loading.
- (3) Utility easements shall not be located within transitional buffers except those which cross the buffer at a right angle. Where the zoning administrator determines that a certain utility location or configuration which is essential conflicts with this standard, the administrator may, in writing, modify this requirement by imposing different standards to achieve an equivalent buffering effect.

(e) *Relationship between transitional buffer and other elements.* Transitional buffers shall relate to other required design elements as follows:

- (1) *Yard requirements and setbacks.* Where a transitional buffer is required along a property line, the minimum yard and setback along said property line shall be the greater of the yard and setback required for the particular zoning district or the width of the transitional buffer.
- (2) *Landscape yards.* Landscape yards may be incorporated into the transitional buffer and no additional landscaping above and beyond that required for the transitional buffer shall be necessary.

(f) *Modification of buffer standards.*

- (1) Where the zoning district boundary line which requires a transitional buffer follows a public street or highway right-of-way of less than ninety feet (90') ~~[27m]~~ in width, the following shall apply:

- a. Where an industrial district abuts a residential district, the normally applicable transitional buffer shall be provided and may not be reduced or modified in any way;
 - b. In any situation other than an industrial district abutting a residential district, the required transitional buffer may be reduced to one-half ($\frac{1}{2}$) the normally required width, or twenty feet (20') ~~[6m]~~, whichever is greater. In such cases, the landscaping and design standards for the required transitional buffer yard may be modified to include appropriate trees and shrubs which visually screen all parking, loading, and storage areas, but not the buildings; however, in no case shall the planting ratio be less than that required for a Type 25 Buffer. one tree for each three hundred fifty (350) square feet [1:30m²] plus one (1) shrub for each one hundred (100) square feet [1:9m²] of planting area contained in the modified buffer.
- (2) Where the zoning district boundary line which requires a transitional buffer follows a public street or highway right-of-way ninety feet (90') ~~[27m]~~ or greater in width, no transitional buffer shall be required.
 - (3) Where adjacent properties of differing zoning intensities are being developed in a cohesive, planned and coordinated manner under the equivalent of a master development plan, the zoning administrator may waive or reduce any transitional buffer required along zoning district lines which are internal to the development.
 - (4) Where the adjacent property giving rise to the need for a transitional buffer is under public ownership, is likely to remain under public ownership, and is managed for watershed purposes, the otherwise required transitional buffer shall be waived. Where the adjacent public land is managed as public park land, the zoning administrator may modify or waive the transitional buffer requirement consistent with the public interest in the park land.
 - (5) Where property on which a transitional buffer is required has already been developed in a manner which precludes full implementation of these requirements, the zoning administrator may modify these requirements on a case-by-case basis to achieve as much of the desired buffering as is possible. In making such modifications, the zoning administrator may consider balancing the existing development with the needs of the community at large. Modifications could, for example, include the use of berms or increased numerical planting requirements in lieu of the otherwise required transitional buffer width.
 - (6) Where the zoning district boundary along which a transitional buffer is required traverses environmentally sensitive land or water features, the zoning administrator may modify the location, layout, arrangement, and design in an appropriate manner which balances the buffering requirements with the environmental resources.
 - (7) Where a properly engineered and designed landscaped berm is proposed to supplement the screening / buffering qualities of a required transitional buffer, the zoning administrator may authorize up to a 25% reduction in the required buffer width. **Minimum heights for berms proposed for this purpose shall be as follows:**

Type 25 Buffer - Minimum Height: 2 feet
Type 35 Buffer - Minimum Height: 3 feet
Type 50 Buffer - Minimum Height: 4 feet
- (g) *Transitional buffers abutting properties in adjacent jurisdictions.* Where a commercial or industrial district abuts property in an adjacent locality which is in a residential zoning district

and used as such, a transitional buffer shall be provided as if the abutting property were classified RC (resource conservation).

Sec. 24.1-244. Landscape yards.

- (a) All proposed new developments shall include landscape yards around the perimeter of the site and the buildings erected on the site in order to facilitate adequate control and management of stormwater runoff and of non-point source pollution as well as to enhance the aesthetics of the project. In the case of expansions or redevelopment of existing development, perimeter landscape yards of the specified size, or as near to that size as determined practical by the zoning administrator, shall be provided on all sides of the site adjacent to such expansion or redevelopment.
- (1) The minimum dimensions of landscape yards around the site perimeter shall be twenty feet (20') ~~[6m]~~ for front yards and ten feet (10') ~~[3m]~~ for side and rear yards, to be measured from the lot line or, where drainage ditches or structures are located or are proposed to be located along lot lines, from the top or inside edge of the open ditch or structure. Landscape yards, as required herein, may include driveways providing access to other parcels in an effort to promote unified project design.
- (2) The zoning administrator may approve the transfer of up to fifty percent (50%) of the required landscape yard located behind the rear of the principal building on the site to the area in front of the principal building on the site provided that all of the following conditions are met:
- a. No remaining landscape yard shall be less than five feet (5') ~~[1.5m]~~ in width;
- b. The total amount of landscaped open space on the site is not less than it would be without the transfer; and
- c. No required transitional buffer is reduced.
- (3) Landscape yards shall be landscaped with trees, shrubs, bushes, plant material and ground cover in accordance with the provisions of section 24.1-242 of this chapter. If transfers have occurred, the transferred area shall be landscaped in accordance with the requirements for the area from where it was transferred.
- (b) A landscaped open space strip a minimum of ten feet (10') ~~[3m]~~ in width shall be provided adjacent to and surrounding all buildings and shall be landscaped in accordance with the provisions of section 24.1-242 of this chapter. This open space strip may be bisected by necessary entrances to the building and may include bicycle accommodations and pedestrian sidewalks serving the entrances provided that no more than fifty percent (50%) of the open space strip may be comprised of impervious surfaces. In no case shall off-street parking be located within ten feet (10') ~~[3m]~~ of any building on the site.
- (1) That portion of this landscaped open space required at the rear of the principal building ~~on the site~~ may be transferred to the perimeter landscape yard in order to provide additional screening and buffers for adjacent streets or developed properties.
- (2) Where the proposed structure, by reason of its intended use and market orientation, requires vehicular access into the front, ~~and sides or, as well as the rear of the building,~~ the zoning administrator may approve the transfer of the required landscaped open area adjacent to the structure to the perimeter landscape yard in order to provide additional screening and buffers for adjacent streets or developed properties. At least fifty percent (50%) of the area transferred shall be transferred to that portion of the perimeter area located in front of the principal building on the site.

- (3) If transfers have occurred, the transferred area shall be landscaped in accordance with the requirements for the area from where it was transferred.

Sec. 24.1-245. Greenbelts.

- (a) ~~Along the following streets designated by the comprehensive plan as greenbelts, a~~
~~Greenbelts of at least thirty-five foot (35') [11m] of open space shall be provided contiguous~~
 to the street right-of-way along the following roads in accordance with the specified
minimum widths:

- (1) Bypass Road (Route 60) - 35 feet
- (2) Denbigh Boulevard (Route 173) - 35 feet
- (3) Fort Eustis Boulevard (Route 105) - 35 feet
- (4) Hampton Highway (Route 134) - 35 feet
- (5) Merrimac Trail (Route 143) between I-64 at Exit 230 (Camp Peary/Colonial Williamsburg) and Queen Creek - 50 feet
- (6) Penniman Road (Route 641) between the Colonial Parkway and Route 199 - 50 feet
- (7) Route 132 - 50 feet
- (8) Route 199 - 50 feet
- (9) Victory Boulevard (Route 171) - 35 feet
- (10) East Rochambeau Drive from Oaktree Road (west) intersection to Mooretown Road and from Mooretown Road to dead end - 50 feet
- (11) Mooretown Road from Lightfoot Road to a point 1,400 feet south of its intersection with Clark Lane - 50 feet
- (12) Mooretown Road from Airport Road to Waller Mill Road - 50 feet
- (13) Lightfoot Road from Route 60 to Rochambeau Drive (west) - 50 feet, except where the parcel also has frontage on Route 199, in which case the Lightfoot Road greenbelt shall be 35 feet.
- (14) Rochambeau Drive (west) from Lightfoot Road to James City County line - 50 feet

- (b) Along the Colonial Parkway, a greenbelt of no less than three hundred feet (300') ~~[90m]~~ from the nearest edge of the roadway shall be provided. This may include property owned by the National Park Service.
- (c) The greenbelt shall be left in an undisturbed natural state, unless the board, after conducting a duly advertised public hearing, authorizes clearing or development. Unvegetated or under-vegetated greenbelts shall be landscaped in accordance with the following planting requirements:

<u>35 foot Greenbelt</u>	<u>70 landscape credits per 100 linear feet</u>
<u>50 foot Greenbelt</u>	<u>100 landscape credits per 100 linear feet</u>

Normally required front yard landscape credits may be counted toward these requirements. Nothing in this section however, shall be interpreted to preclude the following activities within greenbelts: (1) the planting of additional trees, shrubs or groundcovers, or the maintenance thereof; (2) the construction and maintenance of bicycle and pedestrian facilities;

- (3) the establishment, construction, and maintenance of necessary entrances to the site; (4) limited clearing of underbrush, nuisance plants, dead or diseased plants/trees, or limbs/understory necessary to provide reasonable sight lines to a commercial establishment; or (5) the installation of utilities necessary to serve the development provided that the crossing of the greenbelt minimizes disturbance to the greatest extent possible; or (6) the installation of signs which do not require disturbance of existing trees, except to the extent necessary to open limited sight lines for the signs. All of these may occur under the terms of an approved plan.
- (d) If approved, modifications shall preserve the feeling and sense of the natural character of the greenbelt as it currently exists and application for modifications shall contain pre-development and post-development renderings. The cost of advertising and conducting public hearings to consider modifications shall be borne by the developer making the request.
- (e) Greenbelts shall be open space that is owned and maintained by a property owners' association, conservation land trust, or equivalent entity. Alternatively, a landscape preservation easement granted to the county or an appropriate land trust may be utilized.
- (f) Commercial properties fronting greenbelt roads shall be permitted to open limited sight lines which allow indirect views of buildings, but generally block views of parking. Such sight line clearing shall be shown on the landscape plan for the site which shall include both plan and perspective views.
- ~~(g)~~ For purposes of calculating residential densities, the area encompassed by the greenbelt shall be considered as developable acreage in such computations.

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Directory: C:\DOCUME~1\casoncd\LOCALS~1\Temp
Template: C:\Documents and Settings\casoncd\Application
Data\Microsoft\Templates\Normal.dot
Title: DIVISION 4
Subject:
Author: carterm
Keywords:
Comments:
Creation Date: 10/31/2003 10:26 AM
Change Number: 9
Last Saved On: 11/04/2003 11:12 AM
Last Saved By: Generic User
Total Editing Time: 208 Minutes
Last Printed On: 11/04/2003 4:25 PM
As of Last Complete Printing
Number of Pages: 16
Number of Words: 6,574 (approx.)
Number of Characters: 37,476 (approx.)